STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	M-0333(1)	13	14

TRAFFIC SIGNAL INSTALLATION NO. 1

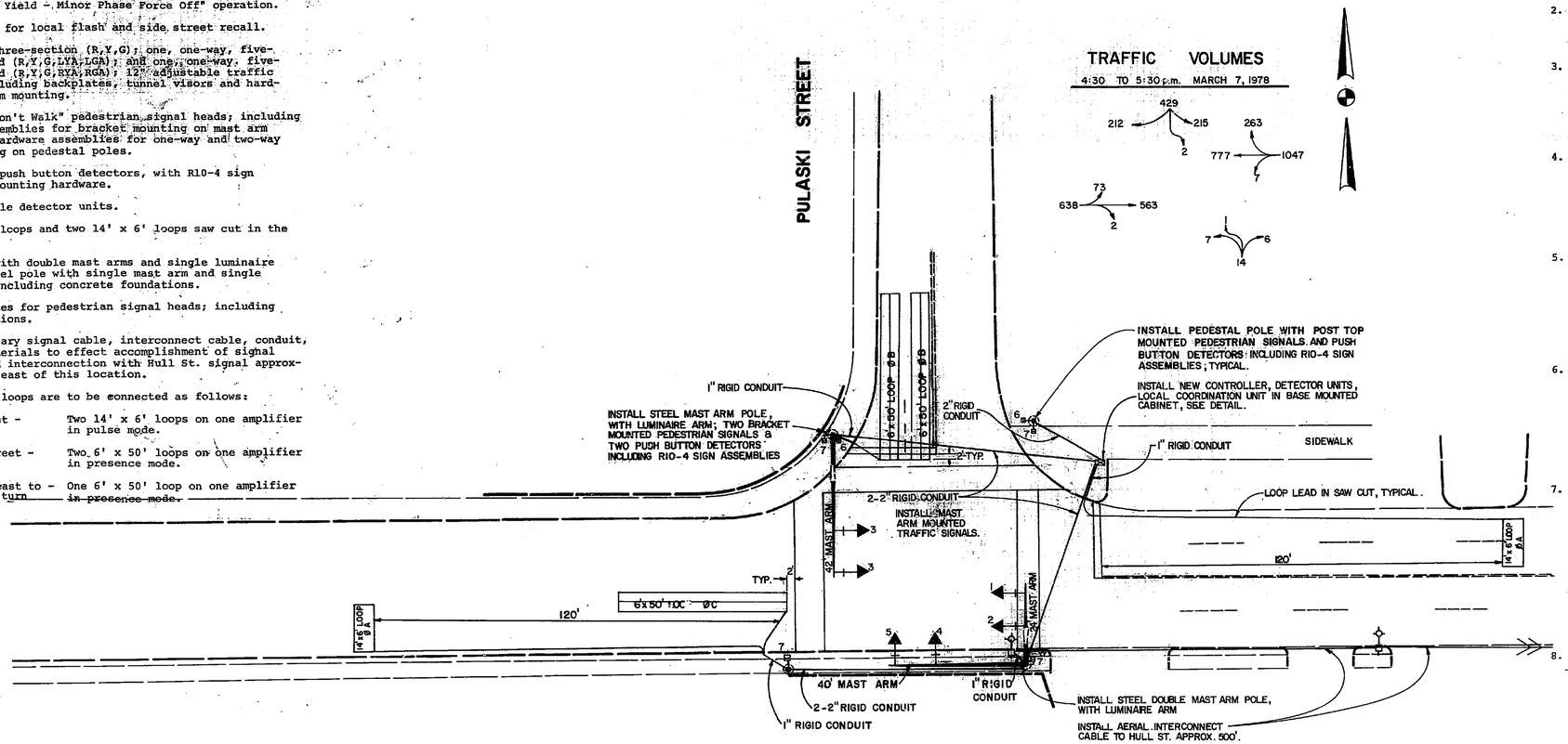
LIST OF MATERIALS

M-0333(1)

1. One three phase fully actuated, solid state digital, NEMA controller with concurrent pedestrian timing, in a base mounted cabinet with door in door switch panel and remote push button for manual operation.
2. One solid state, digital, local coordination unit to provide three cycle lengths with three offsets per cycle, designed for "Major Phase Yield - Minor Phase Force Off" operation.
3. Two time clocks; for local flash and side street recall.
4. Four, one-way, three-section (R,Y,G); one, one-way, five-section clustered (R,Y,G,LYA,LGA); and one, one-way, five-section clustered (R,Y,G,RYA,RGA); 12" adjustable traffic signal heads including backplates, tunnel visors and hardware for mast arm mounting.
5. Six, 12" "Walk-Don't Walk" pedestrian signal heads; including two hardware assemblies for bracket mounting on mast arm poles, and two hardware assemblies for one-way and two-way post top mounting on pedestal poles.
6. Six, pedestrian push button detectors, with R10-4 sign assemblies and mounting hardware.
7. Three loop vehicle detector units.
8. Three, 6' x 50' loops and two 14' x 6' loops saw cut in the pavement.
9. One steel pole with double mast arms and single luminaire arm; and one steel pole with single mast arm and single luminaire arm; including concrete foundations.
10. Two pedestal poles for pedestrian signal heads; including concrete foundations.
11. All other necessary signal cable, interconnect cable, conduit, hardware and materials to effect accomplishment of signal installation and interconnection with Hull St. signal approximately 500 ft. east of this location.

NOTE: Detector loops are to be connected as follows:

ØA Broad Street -	Two 14' x 6' loops on one amplifier in pulse mode.
ØB Pulaski Street -	Two 6' x 50' loops on one amplifier in presence mode.
ØC Broad St. east to north left turn -	One 6' x 50' loop on one amplifier in presence mode.



BROAD STREET

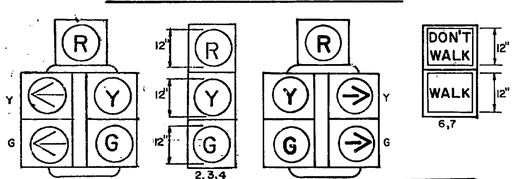
TRAFFIC SIGNAL GENERAL NOTES

1. The complete signal installation shall conform to all appropriate parts of the 1978 Manual on Uniform Traffic Control Devices.
2. Signal heads shall be erected to provide at least 16 feet but no more than 17 feet clearance from bottom of signal heads to top of road surface and a minimum of 8 feet measured horizontally between centers of signal faces.
3. The Contractor shall locate underground utilities in the vicinity of new traffic signal poles before installation. Minor shifts (up to a maximum of 5 feet) in location of new signal poles at the discretion of the Engineer, are acceptable to avoid underground utilities. The basic mast arm configuration, placement of signal heads, and orientation of luminaire arms must be retained as shown on the plans.
4. The Contractor shall be responsible for all traffic signal and/or control system adjustments required by the project during the interim period through installation of the new signal equipment. The Clarke County Traffic Engineering Dept. shall continue to maintain operation of the existing traffic signal system until the new traffic signals are operational. When removed, existing equipment shall be delivered by the Contractor to the Clarke County Traffic Engineering Shop as directed by the Engineer.
5. The Contractor shall establish and test east-west coordination along Broad Street between Pulaski and Oconee Streets. The Master Coordination Unit is existing and located at Washington and Jackson Streets, approximately 700 ft. north of the Broad at Jackson Streets intersection, Installation No.5 this project. It shall be the City's responsibility to provide the interconnect link from the Master to this project and establish final interconnection, timing, programs and coordination. The Contractor need not be involved in this final procedure.
6. Installations shall be individually checked, including east-west coordination, and accepted by the District Traffic Engineer prior to final acceptance. Complete sets of wiring diagrams shall be furnished to both the District Traffic Engineer and the Clarke County Traffic Engineer by the Contractor prior to final acceptance. The District Traffic Engineer's set shall remain in the cabinet after final acceptance. Also, a complete set of wiring diagrams shall be furnished to the DOT Office of Maintenance, 25 Kennedy Dr., Forest Park, GA. 30050, ATTN: Howard Emory, by the Contractor prior to final acceptance.
7. Existing control equipment supplying interconnect pulse is a Crouse Hinds PCBM-3053 fixed-time Master controller, see Installation No. 5. Existing control equipment east of project (Broad at Oconee Sts.) to be interconnected with is 40 fully actuated Crouse Hinds DM400 controller with Crouse Hinds DCU-373 three dial secondary coordination unit. Equipment for this project shall be compatible with above, with stipulation that programming preferably be accomplished with thumbwheel switches (no pin settings). Phase A (Broad St.) will be the coordinated phase with controllers and coordination units set up for rest in ØA WALK. Shielded cable will be used for detector runs as shown on the detail sheet. Interconnect cable shall be 6 pair (12 conductor), No. 16 gauge AWG, shielded. Controller cabinets are to be mounted on an 18" high concrete pedestal (see details). All presence loops shall be quadrupole cut, see detail.
8. All poles (mast arm and pedestal) shall be painted green. Final color selection by Clarke County Traffic Engineer with application of field primer coat and final paint coat approved by the Engineer. All mast arm poles shall have luminaire arms oriented as shown in the plans. These poles shall have pull wires to facilitate future luminaire wiring and installation, not part of this contract. Mast arm pole foundations shall also have one additional 2" rigid conduit stubbed out and capped for this future lighting.
9. Contractor shall maintain close coordination with the Engineer and the Clarke County Traffic Engineer when placing controller pedestal and pole foundation locations. All care must be taken to minimize pedestrian conflict in placement of equipment.
10. The sidewalk area on the south side of Broad St. between Lumpkin thru College to Jackson Streets is the front entrance of the University of Georgia and has a historic cast iron fence and brick sidewalk. This project does not conflict with the cast iron fence, however all care must be taken not to damage this fence. Also, all care shall be taken to minimize distrubance of the brick sidewalk. Any brick removed shall be neatly and securely stored then re-placed in same pattern over trenches and flush to foundations upon completion of work. Excess brick shall be returned to the City of Athens Street Department as directed by the Engineer.

INTERVAL SEQUENCE CHART

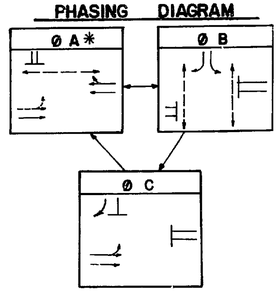
SIGNAL FACE	Ø A R/W	Ø A PED CLR	Ø A CLR TO ØB	Ø B R/W	Ø B PED CLR	Ø B CLR TO ØA & ØC	Ø C R/W	Ø C PED CLR	Ø C CLR TO ØA	FLASH
1	G	G	Y	R	R	R	G→G	G→G	G→Y	Y
2	G	G	Y	R	R	R	G	G	G	Y
3	G	G	Y	R	R	R	R	R	R	Y
4	R	R	R	G	G	Y	R	R	R	R
5	R	R	R	G	G	Y	R→G	R→G	R→Y	R
6	FW	FDW	DW	DW	DW	DW	DW	DW	DW	DARK
7	DW	DW	DW	FW	FDW	DW	? DW	DW	DW	DARK

TRAFFIC SIGNAL HEADS



NOTE: ALL HEADS TO BE EQUIPPED WITH BACKPLATES & TUNNEL VISORS.

PHASING DIAGRAM



* ØA IS COORDINATED PHASE.

TRAFFIC SIGNALS

BROAD STREET

AT

PULASKI STREET

CLARKE CO. SCALE: 1"=20'

5A-01